

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029390**Date Inspected:** 05-Apr-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

Quality Assurance Inspector (QA) William Clifford was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

**In Process Visual Inspection**

RWR201304-001

This QA observed, at random intervals, ABF/JV welder Mike Jiminez #4671 performing Shielded Metal Arc Welding (SMAW) with 4.0mm diameter E7018-MH4-R electrode and implementing Welding Procedure Specification (WPS) ABF-WPS-D15-1000R-03. Welding was performed on tower Electroslag Weld "ESW" designated as T.

Face A

Y= 3570mm

L= 430mm

W= 75mm

D= 63mm

During welding, ABF Quality Control (QC) Andrew Keech was noted monitoring the welding parameters.

RWR201302-007, 008, 009

This QA observed, at random intervals, ABF/JV welder Chris Bruce #8901 performing Shielded Metal Arc Welding (SMAW) with 4.0mm diameter E7018-MH4-R electrode and implementing Welding Procedure

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

Specification (WPS) ABF-WPS-D15-1000R-03. Welding was performed on tower Electroslag Weld "ESW" designated as Q.

Face A

Y= 880mm

L= 560mm

W= 70mm

D= 15mm

During welding, ABF Quality Control (QC) Andrew Keech was noted monitoring the welding parameters.

This QA was present to perform Ultrasonic Testing (UT) inspection verification on Electroslag (ESW) welds inside of the Tower. The purpose of the UT inspection was for the detection of planar indications utilizing both the 'pulse echo' (PE) technique and the 'pitch and catch' (PC) technique for further discontinuity evaluation on ESW welds where previous discontinuities were detected by the single pulse echo search unit.

The data collected from utilizing the P/C technique is for information only and the UT inspection was performed as a joint inspection with ABF/JV Quality Control (QC) Smith Emery NDT personnel. The summary of the joint ultrasonic inspection performed on this date was as follows:

ABF Standard Reference Block: Bottom Third Notch –

Initial calibration off of IIW Block with one (1) transducer cable plugged in the machine.

Transducer: Benchmark; 2.25 MHz

Top Quarter Notch: PE Decibel rating (+7) / PC Decibel rating (-15).

Initial calibration off of IIW Block with one (2) transducer cables plugged in the machine.

Transducer: Benchmark; 2.25 MHz

Top Quarter Notch: PE Decibel rating (+6) / PC Decibel rating (-21).

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

Conversation was relevant to testing performed during this shift.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Clifford, William	Quality Assurance Inspector
----------------------	-------------------	-----------------------------

---

<b>Reviewed By:</b>	Mertz, Robert	QA Reviewer
---------------------	---------------	-------------